

Cell and Tissue Research

Volume 263 1991

Edited by

H. Altner, Regensburg
M. J. Cavey, Calgary
D. E. Kelly, Washington, D.C.
B. Lofts, Norwich
J. F. Morris, Oxford
A. Oksche, Giessen (Coordinating Editor)
B. Scharrer, New York
N. J. Strausfeld, Tucson
L. Vollrath, Mainz

In Cooperation with

A. Björklund, Lund
A. D. Blest, Canberra
R. A. Cloney, Seattle
A. C. Enders, Davis
J. B. Furness, Melbourne
H. G. Hartwig, Düsseldorf
N. Hirokawa, Tokyo
T. Hökfelt, Stockholm
A. F. Holstein, Hamburg
N. T. James, Sheffield
R. O. Kelley, Albuquerque
B. Krisch, Kiel
N. J. Lane, Cambridge
D. G. Osmond, Montreal
E. Reale, Hannover
J.-P. Revel, Pasadena
D. W. Scheuermann, Antwerp
H. Schmalbruch, Copenhagen
L. Sternberger, Baltimore
W. E. Stumpf, Chapel Hill
A. Tixier-Vidal, Paris
E. D. Wachsmuth, Basel
S. E. Wendelaar Bonga, Nijmegen
R. L. Wood, Los Angeles



Springer International

Cell and Tissue Research

This journal was founded in 1924 as the *Zeitschrift für Zellen- und Gewebelehre*, from Vol. 2 (1925) it was published with the subtitle: Continuation of the Schultze-Waldeyer-Hertwig Archiv für mikroskopische Anatomie. *Zeitschrift für Zellforschung und mikroskopische Anatomie* (Vols. 1–20) (1934) as: *Zeitschrift für wissenschaftliche Biologie* (Abteilung B) edited by R. Goldschmidt, W. von Möllendorff, H. Bauer, J. Seiler. Vols. 2–28 (1938) edited by R. Goldschmidt and W. von Möllendorff. Vols. 29–33 (1944) as: *Zeitschrift für Zellforschung und mikroskopische Anatomie*, Abteilung A, Allgemeine Zellforschung und mikroskopische Anatomie, edited by W. von Möllendorff and J. Seiler, from Vol. 34 without the subtitle, Abteilung A, Allgemeine Zellforschung und mikroskopische Anatomie. From Vol. 34 (1949) edited by W. Bargmann, J. Seiler; from Vol. 53 (1960) edited by W. Bargmann, B. Scharrer, J. Seiler; from Vol. 83 (1967) edited by W. Bargmann, D.S. Farner, A. Oksche, B. Scharrer, J. Seiler; from Vol. 125 (1972) edited by W. Bargmann, D.S. Farner, F. Knowles, A. Oksche, B. Scharrer. Beginning with Vol. 125 (1972) with the subtitle Cell and Tissue Research, beginning with Vol. 148 (1974) under the title Cell and Tissue Research and the subtitle Continuation of *Zeitschrift für Zellforschung und mikroskopische Anatomie* and beginning with Vol. 235 (1984) under the title Cell and Tissue Research. Beginning with Vol. 164 (1975), edited by W. Bargmann, D.S. Farner, B. Lofts, A. Oksche, B. Scharrer and L. Vollrath; As of Vol. 193 (1978), edited by D.S. Farner, B. Lofts, A. Oksche (Coordinating Editor), B. Scharrer and L. Vollrath; from Vol. 227 (1981), edited by D.S. Farner, B. Lofts, J.F. Morris, A. Oksche (Coordinating Editor), B. Scharrer and L. Vollrath; from Vol. 228 (1983), edited by D.S. Farner, D.E. Kelly, B. Lofts, J.F. Morris, A. Oksche (Coordinating Editor), B. Scharrer and L. Vollrath. Beginning with Vol. 235 (1984), title changed to Cell and Tissue Research (no subtitle). As of Vol. 251 (1988), edited by H. Altner, D.S. Farner, B. Lofts, J.F. Morris, A. Oksche (Coordinating Editor), B. Scharrer, N.J. Strausfeld and L. Vollrath. Beginning with Vol. 252/3 (1988), M.J. Cavey became one of the editors. From Vol. 254/1 (1988), edited by H. Altner, M.J. Cavey, B. Lofts, J.F. Morris, A. Oksche (Coordinating Editor), B. Scharrer, N.J. Strausfeld and L. Vollrath.

Published: Vols. 1–33 (1924–1947) Julius Springer, Berlin, Vols. 34–35 (1948–1950) Springer, Wien, from Vol. 36 (1951) Springer, Berlin, Heidelberg.

Copyright

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher; and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as all translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special regulations for photocopies in the USA: Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. This fee is US \$0.20 per page, or a minimum of US \$1.00 if an article contains fewer than five pages. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0302-766X, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Printers: Universitätsdruckerei H. Stürtz AG, Würzburg

© Springer-Verlag Berlin · Heidelberg 1991

Springer-Verlag GmbH & Co. KG

W-1000 Berlin 33, FRG

Printed in Germany

Contents of Volume 263

- Al-Ghawas SC → Holmes WN 557-566
- Allaerts W, Mignon A, Denef C: Selectivity of juxtaposition between cup-shaped lactotrophs and gonadotrophs from rat anterior pituitary in culture 217-225
- Anadón R → Ruiz S 597-600
- Apaja-Sarkkinen M → Liakka A 245-252
- Arima T, Kuraoka A, Toriya R, Shibata Y, Uemura T: Quick-freeze, deep-etch visualization of the 'cytoskeletal spring' of cochlear outer hair cells 91-97
- Aste N → Cozzi B 271-284
- Autio-Harmainen H → Liakka A 245-252
- Autuori F → Piacentini M 227-235
- Bailey B, Kirk KL: Diffusion resistances between ADH-induced vacuoles and the extracellular space in rabbit collecting duct: evidence that most vacuoles are intracellular, endocytic compartments 165-171
- Baker BJ → Rand-Weaver M 207-215
- Balthazart J, Foidart A, Surlemont C, Harada N: Distribution of aromatase-immunoreactive cells in the mouse fore-brain 71-79
- Barrenechea MA → Martínez A 541-548
- Bartsch D, Mai JK: Distribution of the 3-fucosyl-N-acetyl-lactosamine (FAL) epitope in the adult mouse brain 353-366
- Beetschen J-C → Darribère T 507-514
- Beier K → Masuda T 145-154
- Bement WM → Dersch MA 375-383
- Bidmon H-J, Stumpf WE, Granger NA: Ecdysteroid binding sites localized by autoradiography in the central nervous system of precommitment fifth-stadium *Manduca sexta* larvae 183-194
- Bigbee JW → Sloan KE 265-270
- Bockman DE → Kuratani S 99-105
- Boivin G → Meyran JC 345-351
- Bosshardt DD, Schroeder HE: Initiation of acellular extrinsic fiber cementum on human teeth. A light- and electron-microscopic study 311-324
- Bosshardt DD, Schroeder HE: Establishment of acellular extrinsic fiber cementum on human teeth. A light- and electron-microscopic study 325-336
- Boucaut J-C → Darribère T 507-514
- Brookes SJH, Steele PA, Costa M: Calretinin immunoreactivity in cholinergic motor neurones, interneurones and visomotor neurones in the guinea-pig small intestine 471-481
- Buchholz C → Krisch B 253-263
- Bulinski JC → Handel SE 419-430
- Burnstock G → Fehér E 567-572
- Burnstock G → Tomlinson A 173-181
- Burrell MA, Villaro AC, Rindi G, Solcia E, Polak JM, Sesma P: An histological and immunocytochemical study of the neuroendocrine cells in the intestine of *Podarcis hispanica* Steindachner, 1870 (Lacertidae) 549-556
- Cantino M → Izutsu KT 535-540
- Capco DG → Dersch MA 375-383
- Carr JA, Norris DO, Samora A: Organization of tyrosine hydroxylase-immunoreactive neurons in the di- and mesencephalon of the American bullfrog (*Rana catesbeiana*) during metamorphosis 155-163
- Costa M → Brookes SJH 471-481
- Cozzi B, Viglietti-Panzica C, Aste N, Panzica GC: The serotonergic system in the brain of the Japanese quail. An immunohistochemical study 271-284
- Cronshaw J → Holmes WN 557-566
- Dahlqvist Å → Domeij S 495-505
- Darribère T, Riou J-F, Guida K, Duprat A-M, Boucaut J-C, Beetschen J-C: A maternal-effect mutation disturbs extracellular matrix organization in the early *Pleurodeles waltl* embryo 507-514
- Davidson G → Morgan PJ 529-534
- Dedman JR → Goldberg M 81-89
- Deguchi T → Sato T 413-418
- Denef C → Allaerts W 217-225
- Dersch MA, Bement WM, Larabell CA, Mecca MD, Capco DG: Cortical membrane-trafficking during the meiotic resumption of *Xenopus laevis* oocytes 375-383
- Ding W-G, Fujimura M, Tooyama I, Kimura H: Phylogenetic study of serotonin-immunoreactive structures in the pancreas of various vertebrates 237-243
- Dini L → Piacentini M 227-235
- Dirksen H, Müller A, Keller R: Crustacean cardioactive peptide in the nervous system of the locust, *Locusta migratoria*: an immunocytochemical study on the ventral nerve cord and peripheral innervation 439-457
- Dix DJ, Eisenberg BR: Redistribution of myosin heavy chain mRNA in the mid-region of stretched muscle fibers 61-69
- Domeij S, Dahlqvist Å, Forsgren S: Studies on colocalization of neuropeptide Y, vasoactive intestinal polypeptide, catecholamine-synthesizing enzymes and acetylcholinesterase in the larynx of the rat 495-505
- Duprat A-M → Darribère T 507-514
- Duve H, Thorpe A, Tobe SS: Immunocytochemical mapping of neuronal pathways from brain to corpora cardiaca/corpora allata in the cockroach *Diploptera punctata* with antisera against Met-enkephalin-Arg⁶-Gly⁷-Leu⁸ 285-291
- Edwin N → Leigh CM 195-198
- Efendic S → Johansson O 395-398
- Eguchi G → Kodama R 29-40
- Eisenberg BR → Dix DJ 61-69
- Ende MB van der → Rees EP van 367-373
- Engström-Laurent A → Laurent C 201-205
- Fahimi HD → Masuda T 145-154
- Farrace MG → Piacentini M 227-235
- Fehér E, Burnstock G: Ultrastructure and distribution of somatostatin-like immunoreactive neurons and nerve fibres in the coeliac ganglion of cats 567-572
- Feinberg J → Goldberg M 81-89
- Fesus L → Piacentini M 227-235
- Fischer A → Kluge B 515-528
- Foidart A → Balthazart J 71-79
- Forsgren S → Domeij S 495-505
- Fujieda H → Sato T 413-418
- Fujimura M → Ding W-G 237-243
- Gabella G → Inoue T 137-143
- Gani Y, Luckenbill-Edds L: Quantitative distribution of chick neural crest cells during gangliogenesis 107-114
- Ghibelli L → Piacentini M 227-235
- Goddard MK → Izutsu KT 535-540
- Goldberg M, Feinberg J, Lecolle S, Kaetzel MA, Rainteau D, Lessard JL, Dedman JR, Weinman S: Co-distribution of annexin VI and actin in secretory ameloblasts and odontoblasts of rat incisor 81-89
- Golz R, Thurm U: Cytoskeleton-membrane interactions in the cnidocil complex of hydrozoan nematocytes 573-583
- Granger NA → Bidmon H-J 183-194
- Greaser ML → Handel SE 419-430
- Griswold MD → Morales CR 125-130
- Guida K → Darribère T 507-514
- Handel SE, Greaser ML, Schultz E, Wang S-M, Bulinski JC, Lin JJ-C, Lessard JL: Chicken cardiac myofibrillogenesis studied with antibodies specific for titin and the muscle and nonmuscle isoforms of actin and tropomyosin 419-430
- Harada N → Balthazart J 71-79
- Haumont S → Toussaint-Demyle D 293-301
- Haussler MR → Meyran JC 345-351
- Hellström S → Laurent C 201-205
- Hilliges M → Johansson O 395-398
- Hillis AN → Howie AJ 585-587
- Hirakow R → Sugi Y 459-469
- Holmes WN, Al-Ghawas SC, Cronshaw J, Rohde KE: The structural organization and the steroidogenic responsiveness in vitro of adrenal gland tissue from the neonatal mallard duck (*Anas platyrhynchos*) 557-566
- Howie AJ, Lote CJ, Hillis AN: Immunoreactive Tamm-Horsfall protein in the kidney and skin of the frog *Rana temporaria* 585-587
- Humbert W, Pévet P: Calcium content and concretions of pineal glands of young and old rats. A scanning and X-ray microanalytical study 593-596
- Ichikawa T → Sato T 413-418
- Ikeda H, Yoshimoto T: Developmental changes in proliferative activity of cells of the murine Rathke's pouch 41-47
- Inoue S: Pentosome - a new connective tissue component - is a subunit of amyloid P 431-438
- Inoue T, Gabella G: A vascular network closely linked to the epithelium of the urinary bladder of the rat 137-143
- Iversen JM → Izutsu KT 535-540
- Izutsu KT, Goddard MK, Iversen JM, Robinovitch MR, Oswald TK, Cantino M,

- Johnson D: Maturation-related changes in mass and elemental contents of secretory granules as measured by electron-microprobe 535-540
- Johansson O, Hilliges M, Östenson C-G, Sandberg E, Efendic S, Mutt V: Immunohistochemical localization of porcine diazepam-binding inhibitor (DBI) to rat endocrine pancreas 395-398
- Johnson D → Izutsu KT 535-540
- Johnson-Wells G → Laurent C 201-205
- Kaetzel MA → Goldberg M 81-89
- Kameda Y: Occurrence of colloid-containing follicles in the pars distalis of pituitary glands from aging guinea pigs 115-124
- Karttunen T → Liakka A 245-252
- Kawauchi H → Rand-Weaver M 207-215
- Keller R → Dirksen H 439-457
- Kelley RO → Kodama R 29-40
- Kimura H → Ding W-G 237-243
- King TP → Morgan PJ 529-534
- Kirk KL → Bailey B 165-171
- Kluge B, Fischer A: The pronephros of the early ammocoete larva of lampreys (Cyclostomata, Petromyzontes): Fine structure of the renal tubules 515-528
- Kodama R, Eguchi G, Kelley RO: Ultrastructural and immunocytochemical analysis of the circumferential microfilament bundle in avian retinal pigmented epithelial cells in vitro 29-40
- Komazaki S: A morphological study on regulation of hyaline bleb formation in early embryonic cells of *Cynops pyrrhogaster* 337-344
- Krisch B, Buchholz C, Mentlein R: Somatostatin binding sites on rat diencephalic astrocytes. Light-microscopic study in vitro and in vivo 253-263
- Kulkarni AP → Prasado Rao PD 385-394
- Kuraoka A → Arima T 91-97
- Kuratani S, Bockman DE: Capacity of neural crest cells from various axial levels to participate in thymic development 99-105
- Larabell CA → Dersch MA 375-383
- Laurent C, Johnson-Wells G, Hellström S, Engström-Laurent A, Wells AF: Localization of hyaluronan in various muscular tissues. A morphological study in the rat 201-205
- Lawson W → Morgan PJ 529-534
- Lecolle S → Goldberg M 81-89
- Leigh CM, Edwin N: An immunocytochemical study of the endocrine pancreas in the Australian fat-tailed dunnart (*Sminthopsis crassicaudata*) 195-198
- Lessard JL → Goldberg M 81-89
- Lessard JL → Handel SE 419-430
- Liakka A, Apaja-Sarkkinen M, Karttunen T, Autio-Harminen H: Distribution of laminin and types IV and III collagen in fetal, infant and adult human spleens 245-252
- Lin JJ-C → Handel SE 419-430
- Loesch A → Tomlinson A 173-181
- López J → Martínez A 541-548
- Lote CJ → Howie AJ 585-587
- Luckenbill-Edds L → Gani Y 107-114
- Mai JK → Bartsch D 353-366
- Martínez A, López J, Barrenechea MA, Sesma P: Immunocytochemical and ultrastructural characterization of endocrine cells in chicken proventriculus 541-548
- Masuda T, Beier K, Yamamoto K, Fahimi HD: Peroxisomes in guinea pig liver: their peculiar morphological features may reflect certain aspects of lipoprotein metabolism in this species 145-154
- Mecca MD → Dersch MA 375-383
- Mentlein R → Krisch B 253-263
- Meyran JC, Morel G, Haussler MR, Boivin G: Immunocytological localization of 1,25-dihydroxyvitamin D₃-like molecules and their receptors in a calcium-transporting epithelium of a crustacean 345-351
- Mignon A → Allaerts W 217-225
- Morales CR, Griswold MD: Variations in the level of transferrin and SGP-2 mRNAs in Sertoli cells of vitamin A-deficient rats 125-130
- Morel G → Meyran JC 345-351
- Morgan PJ, King TP, Lawson W, Slater D, Davidson G: Ultrastructure of melatonin-responsive cells in the ovine pars tuberalis 529-534
- Morita Y → Samejima M 589-592
- Müller A → Dirksen H 439-457
- Muranaka Y → Samejima M 589-592
- Mutt V → Johansson O 395-398
- Nagatsu I → Watanabe T 131-136
- Noppe C → Zimmermann B 483-493
- Norris DO → Carr JA 155-163
- Östenson C-G → Johansson O 395-398
- Oswald TK → Izutsu KT 535-540
- Ozawa H: Changing ultrastructure of thyrotrophs in the rat anterior pituitary after thyroidectomy as studied by immunoelectron microscopy and enzyme cytochemistry 405-412
- Panzica GC → Cozzi B 271-284
- Pévet P → Humbert W 593-596
- Piacentini M, Autuori F, Dini L, Farrace MG, Ghibelli L, Piredda L, Fesus L: "Tissue" transglutaminase is specifically expressed in neonatal rat liver cells undergoing apoptosis upon epidermal growth factor-stimulation 227-235
- Piredda L → Piacentini M 227-235
- Polak JM → Burrell MA 549-556
- Prasado Rao PD, Kulkarni AP: Retinopetal neuronal system in the brain of an air-breathing teleost fish, *Channa punctata* 385-394
- Rainteau D → Goldberg M 81-89
- Rand-Weaver M, Baker BJ, Kawauchi H: Cellular localization of somatolactin in the pars intermedia of some teleost fishes 207-215
- Rees EP van, Ende MB van der, Sminia T: Ontogeny of macrophage subpopulations and Ia-positive dendritic cells in pulmonary tissue of the rat 367-373
- Rehkämper G, Zilles K: Parallel evolution in mammalian and avian brains: comparative cytoarchitectonic and cytochemical analysis 3-28
- Rindi G → Burrell MA 549-556
- Riou J-F → Darribère T 507-514
- Robinovitch MR → Izutsu KT 535-540
- Rohde KE → Holmes WN 557-566
- Ruiz S, Anadón R: The fine structure of lamellate cells in the brain of amphioxus (*Branchiostoma lanceolatum*, Cephalochordata) 597-600
- Samejima M, Tamotsu S, Muranaka Y, Morita Y: Dissociation of photoreceptor cells from the pineal organ of the lamprey, *Lampetra japonica* 589-592
- Samora A → Carr JA 155-163
- Sandberg E → Johansson O 395-398
- Sato T, Deguchi T, Ichikawa T, Fujieda H, Wake K: Localization of hydroxyindole O-methyltransferase-synthesizing cells in bovine epithalamus: immunocytochemistry and in-situ hybridization 413-418
- Scheiff J-M → Toussaint-Demyle D 293-301
- Schmitz Y, Wolburg H: Gap junction morphology of retinal horizontal cells is sensitive to pH alterations in vitro 303-310
- Schroeder HE → Bosshardt DD 311-324
- Schroeder HE → Bosshardt DD 325-336
- Schultz E → Handel SE 419-430
- Sesma P → Burrell MA 549-556
- Sesma P → Martínez A 541-548
- Shibata Y → Arima T 91-97
- Shimohigashi M, Tominaga Y: Identification of UV, green and red receptors, and their projection to lamina in the cabbage butterfly, *Pieris rapae* 49-59
- Slater D → Morgan PJ 529-534
- Sloan KE, Stevenson JA, Bigbee JW: Qualitative and quantitative comparison of the distribution of phosphorylated and non-phosphorylated neurofilament epitopes within central and peripheral axons of adult hamster (*Mesocricetus auratus*) 265-270
- Sminia T → Rees EP van 367-373
- Solcia E → Burrell MA 549-556
- Steele PA → Brookes SJH 471-481
- Stevenson JA → Sloan KE 265-270
- Stumpf WE → Bidmon H-J 183-194
- Sugi Y, Hirakow R: Cytoskeletal filaments in embryonic chick myocardial cells as revealed by the quick-freeze deep-etch method combined with immunocytochemistry 459-469
- Surlemont C → Balthazart J 71-79
- Tamotsu S → Samejima M 589-592
- Thorpe A → Duve H 285-291
- Thurm U → Golz R 573-583
- Tobe SS → Duve H 285-291
- Tominaga Y → Shimohigashi M 49-59
- Tomlinson A, Van Vlijmen H, Loesch A, Burnstock G: An immunohistochemical study of endothelial cell heterogeneity in the rat: observations in "en face" Häutchen preparations 173-181
- Tooyama I → Ding W-G 237-243
- Toriya R → Arima T 91-97
- Toussaint-Demyle D, Scheiff J-M, Haumont S: Thymic accessory cell complexes in vitro and in vivo: morphological study 293-301
- Uemura T → Arima T 91-97
- Van Vlijmen H → Tomlinson A 173-181

- Viglietti-Panzica C → Cozzi B 271–284
Villaro AC → Burrell MA 549–556
Wachtel HC → Zimmermann B 483–493
Wake K → Sato T 413–418
Wang S-M → Handel SE 419–430
Watanabe T, Nagatsu I: Immunohistochemical colocalization of insulin, aromatic L-amino acid decarboxylase and dopamine beta-hydroxylase in islet B cells of chicken pancreas 131–136
Weinman S → Goldberg M 81–89
Wells AF → Laurent C 201–205
Wolburg H → Schmitz Y 303–310
Wolfrum U: Distribution of F-actin in the compound eye of the blowfly, *Calliphora erythrocephala* (Diptera, Insecta) 399–403
Yamamoto K → Masuda T 145–154
Yoshimoto T → Ikeda H 41–47
Zilles K → Rehkämper G 3–28
Zimmermann B, Wachtel HC, Noppe C: Patterns of mineralization in vitro 483–493

Indexed in *Current Contents*

Subject Index

- Acetylcholine
 - Holmes WN, et al. 557–566
- Acetylcholinesterase
 - Domeij S, et al. 495–505
- ACTH
 - Holmes WN, et al. 557–566
 - Ikeda H, et al. 41–47
- Actin
 - Goldberg M, et al. 81–89
 - Handel SE, et al. 419–430
 - Kodama R, et al. 29–40
- Actin filaments
 - Kodama R, et al. 29–40
 - Wolfrum U 399–403
- Adenosine monophosphate
 - Morgan PJ, et al. 529–534
- Adrenal cortex
 - Holmes WN, et al. 557–566
- Aging
 - Humbert W, et al. 593–596
 - Kameda Y 115–124
- Ameloblasts
 - Goldberg M, et al. 81–89
- Amyloid
 - Inoue S 431–438
- Angiotensin
 - Holmes WN, et al. 557–566
 - Tomlinson A, et al. 173–181
- Apoptosis
 - Piacentini M, et al. 227–235
- Aromatase
 - Balthazart J, et al. 71–79
- Astrocytes
 - Krisch B, et al. 253–263
- Autonomic ganglia
 - Fehér E, et al. 567–572
- Autonomic innervation
 - Brookes SJH, et al. 471–481
 - Fehér E, et al. 567–572
- Autoradiography
 - Bidmon H-J, et al. 183–194
 - Ikeda H, et al. 41–47
 - Rehkämper G, et al. 3–28
- Axons
 - Sloan KE, et al. 265–270
- Basal lamina, basement membrane
 - Inoue S 431–438
 - Liakka A, et al. 245–252
- Brain, invertebrate
 - Bidmon H-J, et al. 183–194
 - Dircksen H, et al. 439–457
- Brain, vertebrate
 - Cozzi B, et al. 271–284
 - Rehkämper G, et al. 3–28
 - Ruiz S, et al. 597–600
- Brain mapping
 - Bartsch D, et al. 353–366
- 5-Bromo-2-deoxyuridine
 - Ikeda H, et al. 41–47
- Calcium-binding proteins
 - Brookes SJH, et al. 471–481
- Calcium ions
 - Izutsu KT, et al. 535–540
 - Meyran JC, et al. 345–351
- Calcium, localization
 - Humbert W, et al. 593–596
- Calretinin
 - Brookes SJH, et al. 471–481
- Catalase
 - Masuda T, et al. 145–154
- Catecholamines
 - Holmes WN, et al. 557–566
- Catecholamine-synthesizing enzymes
 - Carr JA, et al. 155–163
 - Watanabe T, et al. 131–136
- CD-15 marker
 - Bartsch D, et al. 353–366
- Cell culture
 - Allaerts W, et al. 217–225
 - Morgan PJ, et al. 529–534
 - Piacentini M, et al. 227–235
 - Toussaint-Demyllé D, et al. 293–301
- Cell differentiation
 - Kodama R, et al. 29–40
- Cell division
 - Komazaki S 337–344
- Cell isolation
 - Samejima M, et al. 589–592
- Cell junctions
 - Kodama R, et al. 29–40
- Cell kinetics
 - Komazaki S 337–344
- Cell migration, – motility, – movements
 - Kuratani S, et al. 99–105
- Cell proliferation
 - Piacentini M, et al. 227–235
- Cementum, dental
 - Bosshardt DD, et al. 311–324
 - Bosshardt DD, et al. 325–336
- Chimeras
 - Kuratani S, et al. 99–105
- Cholinergic neurons, terminals
 - Brookes SJH, et al. 471–481
- Chromaffin cells
 - Holmes WN, et al. 557–566
- Chromogranin A
 - Burrell MA, et al. 549–556
- Cnidocil complex
 - Golz R, et al. 573–583
 - Golz R, et al. 573–583
- Cobalt labeling
 - Rao PDP, et al. 385–394
- Coeliac ganglion
 - Fehér E, et al. 567–572
- Collagen
 - Liakka A, et al. 245–252
- Collagen filaments, – fibers
 - Bosshardt DD, et al. 325–336
 - Liakka A, et al. 245–252
- Colloid, hypophysial
 - Kameda Y 115–124
- Colloidal gold, – method
 - Martinez A, et al. 541–548
- Compartments, structural, functional
 - Rehkämper G, et al. 3–28
- Compound eye
 - Shimohigashi M, et al. 49–59
- Connective tissue
 - Wolfrum U 399–403
- Contractile apparatus
 - Inoue S 431–438
- Corpora allata
 - Arima T, et al. 91–97
- Corpus cardiacum
 - Duve H, et al. 285–291
- Cortical granules, ovum
 - Dersch MA, et al. 375–383
- Crustacean cardioactive peptide (CCAP)
 - Dircksen H, et al. 439–457
- Cycloheximide
 - Komazaki S 337–344
- Cytoarchitectonic pattern, CNS
 - Rehkämper G, et al. 3–28
- Cytochemistry
 - Bidmon H-J, et al. 183–194
 - Rehkämper G, et al. 3–28
 - Wolfrum U 399–403
- Cytoskeleton
 - Arima T, et al. 91–97
 - Dix DJ, et al. 61–69
 - Komazaki S 337–344
 - Sugi Y, et al. 459–469
 - Wolfrum U 399–403
- Dendritic reticulum cell
 - Rees EP van, et al. 367–373
- Dentin
 - Bosshardt DD, et al. 311–324
 - Bosshardt DD, et al. 325–336
- Desmin
 - Sugi Y, et al. 459–469
- Development, phylogenetic
 - Ding W-G, et al. 237–243
 - Rehkämper G, et al. 3–28
- Development, ontogenetic
 - Darribère T, et al. 507–514
 - Komazaki S 337–344
 - Liakka A, et al. 245–252
 - Piacentini M, et al. 227–235
 - Rees EP van, et al. 367–373
- Developmental regulation
 - Komazaki S 337–344
- Diencephalon
 - Krisch B, et al. 253–263
- Dopamine
 - Schmitz Y, et al. 303–310
- Dopamine β -hydroxylase
 - Domeij S, et al. 495–505
 - Watanabe T, et al. 131–136
- Ear, middle
 - Arima T, et al. 91–97
- Ectoderm
 - Komazaki S 337–344
- Endocytosis
 - Bailey B, et al. 165–171
- Endoplasmic reticulum, specialized
 - Dersch MA, et al. 375–383
- Endothelin
 - Tomlinson A, et al. 173–181
- Endothelium
 - Tomlinson A, et al. 173–181
- Epithalamus
 - Sato T, et al. 413–418
- Epithelium
 - Inoue T, et al. 137–143
- Extracellular matrix, – structures
 - Darribère T, et al. 507–514
- Factor VIII
 - Tomlinson A, et al. 173–181
- Fibrillogenesis
 - Handel SE, et al. 419–430
- Fibronectin
 - Darribère T, et al. 507–514
- Filaments, 10-nm, intermediate
 - Kodama R, et al. 29–40
- Filaments, molecular substructure
 - Kodama R, et al. 29–40
- Follicle, hypophysial
 - Kameda Y 115–124
- Folliculo-stellate cells
 - Kameda Y 115–124
- Forskolin
 - Morgan PJ, et al. 529–534
- Freeze-etching, -fracturing
 - Schmitz Y, et al. 303–310
 - Sugi Y, et al. 459–469
- 3-Fucosyl-N-acetyl-10ctosamine (FAL)
 - Bartsch D, et al. 353–366
- Gap junction; see also Nexus
 - Schmitz Y, et al. 303–310
- Gastrulation
 - Darribère T, et al. 507–514
- Glucagon
 - Leigh CM, et al. 195–198
- Glycosaminoglycans
 - Laurent C, et al. 201–205
- Gonadotropic cells, gonadotropes
 - Allaerts W, et al. 217–225
- Growth factors
 - Piacentini M, et al. 227–235
- Growth hormone cells
 - Kameda Y 115–124
- Gut
 - Martinez A, et al. 541–548
- Gut hormones
 - Burrell MA, et al. 549–556
- Hair cells
 - Arima T, et al. 91–97
- Heart
 - Sugi Y, et al. 459–469
- Hepatocytes
 - Piacentini M, et al. 227–235
- Horizontal cells
 - Schmitz Y, et al. 303–310
- Hyaluronic acid, hyaluronan
 - Laurent C, et al. 201–205
- Hybridization, in situ
 - Dix DJ, et al. 61–69
 - Morales CR, et al. 125–130
 - Sato T, et al. 413–418
- Hydroxyindole-O-methyltransferase (HIOMT)

- Sato T, et al. 413–418
Hypothalamo-hypophysial system
Carr JA, et al. 155–163
Hypothalamus
Balthazart J, et al. 71–79
Cozzi B, et al. 271–284
Image processing
Rehkämper G, et al. 3–28
Immunocytochemistry
Balthazart J, et al. 71–79
Burrell MA, et al. 549–556
Burrell MA, et al. 549–556
Cozzi B, et al. 271–284
Fehér E, et al. 567–572
Leigh CM, et al. 195–198
Martínez A, et al. 541–548
Meyran JC, et al. 345–351
Rand-Weaver M, et al. 207–215
Sato T, et al. 413–418
Sloan KE, et al. 265–270
Watanabe T, et al. 131–136
Immunofluorescence microscopy
Handel SE, et al. 419–430
Immunohistochemistry
Bartsch D, et al. 353–366
Ding W-G, et al. 237–243
Duve H, et al. 285–291
Howie AJ, et al. 585–587
Inoue S. 431–438
Johansson O, et al. 395–398
Laurent C, et al. 201–205
Rees EP van, et al. 367–373
Incisor
Goldberg M, et al. 81–89
Indoleamines
Cozzi B, et al. 271–284
Innervation
Domeij S, et al. 495–505
Insulin
Leigh CM, et al. 195–198
Watanabe T, et al. 131–136
Integrins
Darribère T, et al. 507–514
Interdigitating cells
Toussaint-Demyle D, et al. 293–301
Intermembrane connectors
Golz R, et al. 573–583
Golz R, et al. 573–583
Intestine, large
Burrell MA, et al. 549–556
Intestine, small
Brookes SJH, et al. 471–481
Burrell MA, et al. 549–556
Kidney
Howie AJ, et al. 585–587
Kluge B, et al. 515–528
Laminin
Liakka A, et al. 245–252
Larynx
Domeij S, et al. 495–505
Lipids
Masuda T, et al. 145–154
Lipoproteins
Masuda T, et al. 145–154
Liver
Masuda T, et al. 145–154
Lung
Rees EP van, et al. 367–373
Macrophages
Rees EP van, et al. 367–373
Toussaint-Demyle D, et al. 293–301
Matrix vesicles, extracellular
Zimmermann B, et al. 483–493
Mechanoelectric transduction
Golz R, et al. 573–583
Golz R, et al. 573–583
Meiosis
Dersch MA, et al. 375–383
Melatonin
Morgan PJ, et al. 529–534
Metamorphosis
Carr JA, et al. 155–163
Met-enkephalin-like immunoreactivity
Duve H, et al. 285–291
Microfilaments
Kodama R, et al. 29–40
Microtubule-membrane bridges
Golz R, et al. 573–583
Microtubules
Golz R, et al. 573–583
Golz R, et al. 573–583
Microwave-fixation
Laurent C, et al. 201–205
Mineralization
Zimmermann B, et al. 483–493
Morphogenesis
Gani Y, et al. 107–114
mRNA
Dix DJ, et al. 61–69
Mucosa
Rees EP van, et al. 367–373
Muscle, cardiac
Handel SE, et al. 419–430
Laurent C, et al. 201–205
Muscle, smooth
Laurent C, et al. 201–205
Muscle, striated, skeletal
Dix DJ, et al. 61–69
Laurent C, et al. 201–205
Mutation
Darribère T, et al. 507–514
Myenteric ganglia, – plexus
Brookes SJH, et al. 471–481
Myofibrils
Dix DJ, et al. 61–69
Handel SE, et al. 419–430
Myosin
Dix DJ, et al. 61–69
Handel SE, et al. 419–430
Myotubes
Dix DJ, et al. 61–69
Necrosis
Zimmermann B, et al. 483–493
Nerve cells
Samejima M, et al. 589–592
Neural crest, – cells
Gani Y, et al. 107–114
Kuratani S, et al. 99–105
Neuroendocrine system, diffuse
Burrell MA, et al. 549–556
Neurofilament protein
Sloan KE, et al. 265–270
Neurofilaments
Sloan KE, et al. 265–270
Neuronal connections
Rao PDP, et al. 385–394
Neurons
Dirksen H, et al. 439–457
Rao PDP, et al. 385–394
Neuropeptide immunocytochemistry
Dirksen H, et al. 439–457
Duve H, et al. 285–291
Rehkämper G, et al. 3–28
Neuropeptide Y
Domeij S, et al. 495–505
Neurosecretory neurons
Duve H, et al. 285–291
Nocodazole
Komazaki S. 337–344
Odontoblasts
Goldberg M, et al. 81–89
Organoid culture
Zimmermann B, et al. 483–493
Osteocytes
Zimmermann B, et al. 483–493
Pancreas, endocrine
Ding W-G, et al. 237–243
Johansson O, et al. 395–398
Leigh CM, et al. 195–198
Watanabe T, et al. 131–136
Pancreas, exocrine
Ding W-G, et al. 237–243
Pancreatic polypeptide (PP)
Leigh CM, et al. 195–198
Parotid gland
Izutsu KT, et al. 535–540
Izutsu KT, et al. 535–540
PAS-positive cells
Rand-Weaver M, et al. 207–215
Peptide hormones
Martínez A, et al. 541–548
Peptides
Johansson O, et al. 395–398
Periodontium
Bosshardt DD, et al. 311–324
Bosshardt DD, et al. 325–336
Peroxisomes
Masuda T, et al. 145–154
Phalloidin
Wolfrum U. 399–403
Phosphorylation
Sloan KE, et al. 265–270
Photoreceptor cells
Ruiz S, et al. 597–600
Pineal gland
Humbert W, et al. 593–596
Pinealocytes
Sato T, et al. 413–418
Pineal organ, – complex
Samejima M, et al. 589–592
Sato T, et al. 413–418
Pineal photoreceptors
Samejima M, et al. 589–592
Pituitary gland, pars anterior (distalis)
Allaerts W, et al. 217–225
Kameda Y. 115–124
Ozawa H. 405–412
Pituitary gland, pars intermedia
Rand-Weaver M, et al. 207–215
Pituitary gland, pars tuberalis
Morgan PJ, et al. 529–534
Preoptic area
Balthazart J, et al. 71–79
Prolactin cells
Allaerts W, et al. 217–225
Proliferation, proliferative activity
Ikeda H, et al. 41–47
Pronephros
Kluge B, et al. 515–528
Proteins
Howie AJ, et al. 585–587
Prothoracic gland
Bidmon H-J, et al. 183–194
Rathke's pouch
Ikeda H, et al. 41–47
Receptor, membrane
Bidmon H-J, et al. 183–194
Krisch B, et al. 253–263
Rehkämper G, et al. 3–28
Regeneration
Dix DJ, et al. 61–69
Respiration
Rao PDP, et al. 385–394
Retina
Rao PDP, et al. 385–394
Retinula cells
Shimohigashi M, et al. 49–59
Retrograde labeling
Rao PDP, et al. 385–394
Salivary glands
Izutsu KT, et al. 535–540
Secretory cells
Martínez A, et al. 541–548
Morgan PJ, et al. 529–534
Secretory granules
Izutsu KT, et al. 535–540
Martínez A, et al. 541–548
Sensory neurons
Gani Y, et al. 107–114
Serotonin (5-HT)
Burrell MA, et al. 549–556
Cozzi B, et al. 271–284
Ding W-G, et al. 237–243
Sertoli cells
Morales CR, et al. 125–130
Skin
Howie AJ, et al. 585–587
Somatostatin (SRIF)
Fehér E, et al. 567–572
Krisch B, et al. 253–263
Leigh CM, et al. 195–198
Somatostatin immunoreactivity
Fehér E, et al. 567–572
Somatostatin system
Fehér E, et al. 567–572
Spectral sensitivity
Shimohigashi M, et al. 49–59
Spleen
Liakka A, et al. 245–252
S-100 protein
Kameda Y. 115–124
Steroids
Holmes WN, et al. 557–566
Supporting cells
Samejima M, et al. 589–592
Sympathetic ganglia
Gani Y, et al. 107–114

- Teeth
 Bosshardt DD, et al. 311–324
 Bosshardt DD, et al. 325–336
 Goldberg M, et al. 81–89
- Thymus
 Kuratani S, et al. 99–105
 Toussaint-Demyle D, et al. 293–301
- Thyroidectomy
 Ozawa H 405–412
- Thyroidectomy cells
 Ozawa H 405–412
- Thyrotropes
 Ozawa H 405–412
- Tracer studies
 Rehkämper G, et al. 3–28
- Transferrin
 Morales CR, et al. 125–130
- Tumor
 Inoue S 431–438
- Tyrosine hydroxylase
 Carr JA, et al. 155–163
- Domeij S, et al. 495–505
- Ultrahistochemistry
 Goldberg M, et al. 81–89
 Ozawa H 405–412
 Sugi Y, et al. 459–469
- Ultraviolet radiation
 Shimohigashi M, et al. 49–59
- Urinary bladder
 Inoue T, et al. 137–143
- Vascular corrosion replicas
 Inoue T, et al. 137–143
- Vascular system, vascularization
 Inoue T, et al. 137–143
- Vasoactive intestinal polypeptide (VIP)
 Domeij S, et al. 495–505
- Vasopressin
 Bailey B, et al. 165–171
- Water transport
 Bailey B, et al. 165–171
- X-ray microanalysis
 Humbert W, et al. 593–596